Testimony

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"Healthcare Information Technology: What are the Opportunities for and Barriers to Interoperable Information Technology Systems?"

St. Vincent's Medical Center

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Jody Pettit, MD

Introduction:

Thank you very much for inviting me to provide testimony on a subject about which I feel so strongly. I am a board-certified Internist and have practiced medicine in Portland for the past 11 years. As a physician, I have the privilege to take care of people and to see our medical system from the front line. There is a glaring problem – and it is the lack of information flow.

Let me tell you a story about a woman that I saw in clinic who came in with a persistent cough. We had tried several treatment regimens but her cough continued. We ordered a chest x-ray and it showed a lesion in her right lung. She had a previous chest x- ray several years ago and she told us it was abnormal in some way but wasn't exactly sure how. Fortunately, she remembered where she had it done, so we called over to that facility to get the old chest x-ray for comparison. If the lesion still looked exactly the same after several years then we wouldn't have to worry as much and we could watch it.
So we waited.
A week later we still didn't have the film. We called again because we could save her the worry, the radiation exposure of more tests, the time and the money that she and her insurer would pay for more tests. We called again, but eventually the resident gave up and ordered a chest CT. A chest CT costs a little less than $1,000. The following week, the old film finally made it over and indeed the lesion was exactly the same after almost 4 years. But by now she spent the time, her 20% co-pay, missed several hours of work, got a hefty dose of unnecessary radiation via CT and spent a weekend in fear that she might have lung cancer.

A chest x-ray + a lack of information could equal a chest CT + biopsy could = a pneumothorax, a chest tube, an ICU admission, a hospital-acquired infection and sepsis. And a $50,000 hospital bill. Or a chest x-ray + timely information = reassurance and prevention of a hospitalization.

This story is not some bizarre exception, or a rare occurrence - there are issues of information flow every time I go to clinic.
I could tell you countless stories of scrambling for information – phone calls to medical records clerks in the wee hours of the morning while the 50 yo man with chest pain is being wheeled down the hall to the cath lab -- we didn't have an old ECG for comparison or his previous cath report – we didn't know if the ECG changes were new so he was going to have a catheter pushed up through his groin into his heart to look at his coronary arteries.

Any case could follow one of two equations:

Clinical condition + unattainable information = cascade of unnecessary tests, possible complications and avoidable cost

Clinical condition + timely information = accurate, well-informed medical decisions and efficient medical care. (cost-effective)

Experiences such as these have led me to refocus my energy.

For the past three years, I have been one among hundreds of Oregonians from the private and public sector that want to find a better way with the use of information technology. We call this collective effort the Oregon Health Information Infrastructure or OHII for short. The Oregon Healthcare Quality Corporation has provided the non-profit, multi-stakeholder home for OHII. The State of Oregon recently created a position in the Oregon Office of Health Policy and Research for a Health Information Technology Coordinator and I will be serving in that role.

The Vision:

The vision of better information flow in healthcare is four-fold:

- A person's health information is available to them anywhere, anytime they need it.
- Health information is private and secure and under the control of the individual.
- Health information infrastructure designed with the patient at the center.
- Health information is used to assure safe, high quality, cost–effective personal and population-based health care.

The Issues:

There are many barriers to overcome to achieve this vision.

EHR adoption issues – Clinicians aren't adopting EHR because of a lack of financial incentives, expense, risk of implementation failure and lack of interoperability which makes for expensive interfaces and prohibits migration to different system.

Technical issues – The optimal technical architecture for interoperability and health data exchange is still being explored. Vendors are just starting to create products to perform this function and engines are operating only in experimental settings.

Standards issues - There are numerous standards organizations in competition for becoming the standard. There is a need for harmonization of these standards. EHR vendors have some but not all data in proprietary formats and new standards would require largely require retrofitting into their software.

Privacy & Security issues –Inappropriate disclosure of health information is one of the top concerns for consumers. Fear of discrimination especially from employers makes people cautious about sharing their health information. Among the many issues, patient control over access is a prominent one.

Business case and sustainability issues – It is well-recognized that in order for the building of information technology systems to be funded that the investors must recognize some value or return on their investment. Furthermore, operating expenses of these systems must be offset by a revenue source in order to be financially sustainable. Studies of the value of HIT and projections regarding whom benefits and how much have been published in the past couple of years. Sustainability models are likewise being devised and tested in some communities are around the US. The answers in this realm are not readily apparent and the question of who will pay is still largely unanswered.

Political will, governance, stakeholder cooperation, data sharing and trust issues - Part of the challenge of moving from an institution-centric model to a patient-centered model is that it requires that data holding entities share information. Patients almost never get all of their medical care in a single location and thus it is inadequate to maintain walled off silos of data at the various points of care. However, institutions may view holding onto the records as a means of holding onto the patient. Thus competitive issues between healthcare entities may lead to an unwillingness to share. Establishing a governance in which the various entities have a seat at the table and agree to rules for decision-making and data sharing is one of the major challenges.

Role of the Oregon Healthcare Quality Corporation:

The Oregon Healthcare Quality Corporation (QCorp) has four initiatives, all of which relate directly or indirectly to the use of health information technology.

Chronic Disease Data Clearinghouse
This proof-of-concept pilot demonstrated that 12 health plans, working together, can provide helpful tools that physicians will use to manage care for patients with diabetes and asthma.
Analysis is providing answers about where people receive their care to guide decisions about how to reduce fragmentation through common data systems.

Common Practice Measurements
Providers, health plans and purchasers are working together to identify a shared set of appropriate out-patient practice quality measurements. These will be used by multiple stakeholders for assessing, reporting and rewarding quality care in Oregon.

Advocacy and Education
Legislative testimony, serving on multiple Health Policy Commission committees and cross-organization board memberships are a few of the ways that Quality Corporation staff advocate for a collaborative quality agenda. Sponsoring and participating in numerous conferences bring Oregonians together for a shared agenda for quality improvement.

Oregon Health Information Infrastructure (OHII)
A strategic plan, developed through stakeholder meetings, is setting the agenda to encourage adoption of electronic health records and systems for securely and efficiently getting information to where it is needed. OHII work (with partners) has included: multiple state-wide conferences, CIO/CMIO forums, a pilot project proposal, EHR inventory to establish a baseline. The Quality Corporation is working to foster the formation of a regional health information organization (RHIO). The Office of the National Coordinator for Health Information Technology (ONCHIT), has called for at least one RHIO per state and one overarching RHIO. In Dr. Brailer's view, a RHIO provides governance and oversight. He believes it is essential to develop a process for making decisions in public and RHIOs should have this public governance process. The OHII effort endeavors to play a role in establishing an open, neutral, inclusive governance process for Oregon and is engaged in dialogue with top healthcare leaders including those in the Oregon Business Council's EHR and Interoperability Subcommittee.

Role of the State of Oregon:

The following is taken from the report to the Oregon Health Policy Commission entitled "Report to the 73rd Legislative Assembly: Electronic Health Records & Data Connectivity"
http://egov.oregon.gov/DAS/OHPPR/HPC/docs/EHR_LegReport_March05.pdf

The report made recommendations regarding the State's possible roles:

- Convene stakeholders
- Assess EHR adoption and community interoperability efforts
- Sponsor meetings
- Examine State laws regarding HIT
- Collaborate with Public Health
- Engage the public
- Coordinate efforts around the state
- Provide funding, if possible
- Partner with the private sector
- Incentivize HIT adoption in role as Payer through Oregon Medical Assistance Program (OMAP)
- Incentivize HIT adoption in role as Purchaser through Oregon Public Employees Benefits Board (PEBB)

Role of the Federal Government:

The Office of the National Coordinator for Health Information Technology (ONCHIT) is organized into the following offices:

Office of HIT adoption

Office of Interoperability and Standards
Office of Programs & Coordination
Office of Policy & Research

They have the following as their major initiatives with the corresponding roles:

American Health Information Community (AHIC)	advisory
Health Information Technology Standards Panel (HITSP)	standards
Certification Commission for Health Information Technology (CCHIT)	compliance
Health Information Security and Privacy Collaboration (HISPC)	security and privacy
National Health Information Network consortia (NHIN)	architecture

A Recommendation for Action:

We don't have the answers to all the issues but what we do have is a framework and a forum for discussion in the Office of the National Coordinator for Health Information Technology (ONCHIT). The good news is things are progressing in the ONCHIT agenda but the missing piece is significant money flowing to the states. The activities that need to take place at the national level are underway but the activities that need to occur at the state level are not well-supported. Exceptions are communities that have received funding or have already been working on this for over a decade. The expectation is not for the government to fund this indefinitely, but assistance with start-up capital could be helpful. There are business models being studied and demonstrated in some communities in the country.

An example of a working model for government funding is the Federal contract process e.g. with Research Triangle International (RTI) and the Health Information Security and Privacy Collaboration (HISPC). RTI serves as a prime contractor and states as subcontractors. This allows contract money to be awarded to states in a semi-competitive process with coordination at the national level. Working through the Governor's office is an effective way to engage state leadership.

So this process requires some leadership *and* some followership.

Economic Analysis of Health Information Technology impact:

Several groups have begun to tackle some of the economic issues relating to the adoption of HIT, the implications for interoperability and the use of clinical decision support tools. Below are some high-level numbers that have been cited as relevant to the discussion.

US Healthcare industry expenditures = $1.7 trillion per year

RAND estimates $81 billion per year **savings** with EHR implementation and networking.

The Center for Information Technology Leadership (CITL) estimates fully standardized health information exchange and interoperability of could yield a net value of $77.8 billion per year once fully implemented. Combined with potential savings from adoption of CPOE in office EHR of $44 billion, the CITL suggests adoption of HIT could save approximately 5% of healthcare expenditure.

A study out of Harvard published in the Annals of Internal Medicine last year estimates the **cost** to build the National Health Information Network at $156 billion in capital investment over 5 years and $48 billion in annual operating costs. *(Annals of Internal Medicine 2005; 143: 165-173.)*

The Bush administration has requested $169 million for health information technology in the 2007 Health and Human Services Department budget, a $58 million increase from the $111 million allocated for health IT in the fiscal 2006 budget passed last month. The health IT funding line includes a requested $116 million for ONCHIT, $50 million for the Agency for Healthcare Research and Quality and $3 million for the HHS assistant secretary for planning and evaluation's budget. *(Source: Government Health IT, Feb. 6, 2006)*

US Healthcare industry expenditures = 1.7 trillion/yr
Estimated Operating Savings = $124 billion/yr
Estimated Operating Cost = $48 billion/yr

Net Operating Savings = $ 76 billion/yr

The CITL suggests adoption of HIT could save approximately 5% of healthcare expenditure

ONCHIT budget = $169 million/yr

The estimated capital investment is $156 billion, the proposed budget is $169 million – this is 1/1,000th of the necessary funding.

These figures help to make the argument for federal funding to help move this effort forward and for CMS in it's role as a payer to incentivize HIT adoption.

Closing Comments:

I will close with these points:

1. There is a critical need for better information flow in healthcare to achieve safe, efficient and high quality care.

2. Real change involves rearranging the system such that the patient is at the center. Until we do this, changes are incremental, not transformational. There is a need for the data holders to share their data for the good of the patient. We need to resolve the arguments regarding data ownership. A person's data needs to be made available to them without question. It is understood that the data holders i.e. providers, health systems and health plans need to keep a copy for their own records, however they should endeavor to make patient-centered data sharing arrangements.

3. The Office of the National Coordinator for HIT is a vehicle already in place for change and to a great degree it is working. We have a forum for discussion and a framework for strategic action. The ONCHIT has been able provide some money for national coordination but very little money to pass through to the states and communities for RHIO formation. What we're lacking is the real financial commitment for this effort at a state level. Start-up capital could help to build the infrastructure that is necessary to derive value and ultimately achieve financial sustainability.

4. Support legislation that authorizes the Secretary of Health and Human Services to make health information technology grants or contracts for the development of information sharing infrastructure and collaborative efforts to spur adoption by small physician groups and others.

ADDENDUM:

Specific examples of issues or barriers:

Solicitation of some health information technology colleagues in Oregon yielded the following specific examples:

Example of lack of regulatory harmonization: A health IT colleague 'on the ground' implementing systems points to regulation from various compliance organizations e.g. JCAHO, NEC, UL, EOC etc. that result in layers and layers of regulations. There is apparently a need for harmonization of these sometimes contradictory and stifling combinations. It was conveyed that the regulations make sense in isolation but become nearly unimplementable when several overlap. There is also a concern that increasing regulation increases the cost of implementation of systems.

Example of vocabulary standards issue or need: Colleagues at Oregon chapter of the American Health Information Management Association (AHIMA) have brought this issue to the fore. They feel that the US needs to adopt and begin implementing ICD-10 clinical coding systems in order to improve the quality of health data and patient care. Their concern it that current classification system, ICD-9-CM is obsolete. Developed nearly 30 years ago, they assert that it cannot accurately describe the diagnoses and inpatient procedures of care delivered in the 21st century. Furthermore, they point out that the US is the only industrialized country in the world that has not adopted it. 99 other countries have preceded the US thus far.

Example of potential legislative need: The US might consider lengthening the statue of limitations on keeping a medical record from 7 years to 107 years. The rationale is that records need to be available for the duration of a person's life.